

Intelligent Flamefinder Detection and Alert System (IFDAS), Phase II

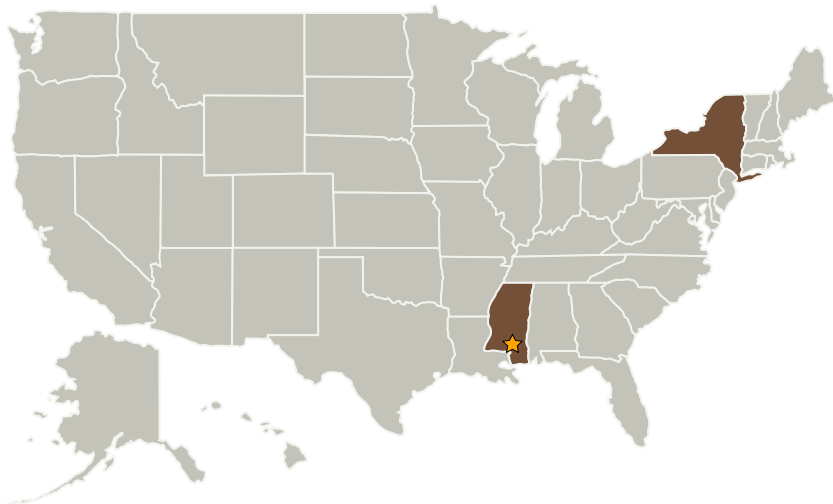
Completed Technology Project (2009 - 2011)



Project Introduction

Current hydrogen flame detection systems exhibit shortcomings ranging from limited detection range, to localization inaccuracy, limited sensitivity, false alarms, and inability to self-diagnose failures. During Phase I, International Electronic Machines Corporation IEM created and tested a prototype version of an Intelligent FlameFinder Detection and Alert System (IFDAS), demonstrating that IEM's system could accurately detect, track, and localize hydrogen flames and reliably discriminate between hydrogen flames and over two dozen sources of false alarms including reflections of flames or the sun, welding, other flame sources, etc., using a unique, innovative, and expandable Flame Detection Expert System design. In Phase II, IEM proposes to develop a full working prototype system employing multiple IFDAS sensor units, an enhanced flame detection expert system, and a comprehensive user interface including means for notifying emergency personnel when a fire is detected. This IFDAS Prototype will be demonstrated under real-world conditions at Stennis Space Center.

Primary U.S. Work Locations and Key Partners



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Table of Contents

Project Introduction	1
Primary U.S. Work Locations and Key Partners	1
Organizational Responsibility	1
Project Transitions	2
Project Management	2
Technology Areas	2

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Stennis Space Center (SSC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★Stennis Space Center(SSC)	Lead Organization	NASA Center	Stennis Space Center, Mississippi
International Electronic Machines Corporation(IEM)	Supporting Organization	Industry Minority-Owned Business, Small Disadvantaged Business (SDB)	Troy, New York

Primary U.S. Work Locations

Mississippi	New York
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Project Transitions

**January 2009:** Project Start**January 2011:** Closed out

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX13 Ground, Test, and Surface Systems
 - └ TX13.2 Test and Qualification
 - └ TX13.2.2 Propulsion, Exhaust, and Propellant Management